ABSTRACT

This invention relates to a novel farnesylated dibenzodiazepinone, named ECO-04601, its pharmaceutically acceptable salts and derivatives, and to methods for obtaining such compounds. One method of obtaining the ECO-04601 compound is by cultivation of a novel strain of *Micromonospora sp.*, 046-ECO11; another method involves expression of biosynthetic pathway genes in transformed host cells. The present invention further relates to *Micromonospora sp.* strain 046-ECO11, to the use of ECO-04601 and its pharmaceutically acceptable salts and derivatives as pharmaceuticals, in particular to their use as inhibitors of cancer cell growth, bacterial cell growth, mammalian lipoxygenase, and to pharmaceutical compositions comprising ECO-04601 or a pharmaceutically acceptable salt or derivative thereof. Finally, the invention relates to novel polynucleotide sequences and their encoded proteins, which are involved in the biosynthesis of ECO-04601.